Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

THE EFFECT OF SPECIAL EXERCISES USING SOME ASSISTIVE TOOLS IN DEVELOPING AGILITY AND ACCURACY OF SCORING WITH THE INSIDE OF THE FOOT FOR FOOTBALL PLAYERS UNDER (20) YEARS OLD

Asst.Lect. Abbas Majid Rashid / College of Physical Education and Sports Sciences - University of Diyala, Iraq.
Abbas.majid@uodiyala.edu.iq

Abstract

The research aims to prepare special exercises using some tools to help develop agility and scoring accuracy with the inside of the foot for football players under 20 years old, as well as to identify the effect of special exercises using some tools to help develop agility and scoring accuracy with the inside of the foot to single out a sample. Search.

To achieve the goal, the researcher used the experimental method with pre-test and post-test for suitability) with the research problem, and the research community consisted of Baghdad clubs for players under (20 years old) for Iraqi youth clubs, numbering (16) clubs, The total number of players is (430) players, which represents (100%) of the number of players. As for the research sample, it was represented by the players of Al-Hodood Sports Club for the youth category, who numbered (26) players, with a percentage of (6.05%). The research sample was chosen randomly by lottery road, The goalkeepers (4) were excluded, as were (4) players due to injury and non-compliance with the training units. (The researcher conducted the pre- and post-test for the individuals in the research sample, and the appropriate statistical treatments were conducted, The researcher concluded that the special exercises prepared by the researcher using some assistive tools had a positive effect in developing agility, and that the special exercises with the assistive tools used in developing agility had a positive impact on the accuracy of scoring from the inside of the foot, Gradually increasing the components of the training load, using appropriate repetitions in a undulating manner, had a positive and effective impact on improving agility, which was reflected in the accuracy of skill performance.

The researcher recommends the need to (emphasize the use of assistive tools by coaches in the training process because of their positive impact on developing and developing the players' abilities and potentials, as well as increasing their excitement factor when performing, Exercises for assistive devices must be applied to other age groups because of their positive role in developing physical and motor qualities and abilities, as well as similar studies and research to be conducted on other physical and motor qualities and skills in football, which the study did not address.

Keywords: Auxiliary tools, scoring accuracy.

1- Definition of the research:

1-1 Introduction to the research and its importance:

(Countries seek progress in various scientific fields, including the sports field, which has been developing significantly as a result of the use of modern and developed methods and techniques in order to achieve the best sports levels). The game of football has received special attention from experts and specialists working in its field, as global levels require determining the form of the training planning process, its methods and programs, whether for local teams or at the level of national teams, as standardizing training, its loads, its

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

adequacy, its types and its goals has become one of the important issues sought by those concerned with the game.

That interest in special exercises in terms of the way they are set and determining the manner in which priority is organized, distributed and classified in their implementation, whether physical, skill or planning exercises, requires complete knowledge of the players' capabilities in a scientific, studied manner, taking into account the experience and practical practice of the coach's training literature, using modern and interesting auxiliary tools that serve the goal, stage and training method used.

The skill performance in football, especially offensive skills, combined with physical abilities, is the key to the team's success in achieving victory. The performance of these skills is closely linked to the development of these abilities, and the attribute of agility is the most prominent factor in mastering them. The idea of football differs in its nature as a team game from many other team games in terms of its fast pace and the succession of mutual motor performances between continuous defense and attack operations throughout the two halves of the match. This requires the necessity of raising the level of performance of football players in offensive skills, "as it is necessary during their implementation of the various offensive skills in any period of the attack during the match to complete the preparation to perform their defensive duties and carry them out as soon as the attack ends, whether it is influential (scoring a goal) or not," as the means and methods of training agility differ according to the type of training system used and the necessary time period available and others. Since agility is one of the important motor attributes in football, the specifications and requirements of the attribute of agility and what it includes of movements that resemble the various and changing playing situations, require performing it in a fun way to avoid fatigue And boredom, as the specificity of these movements and the diversity of their stimuli represent a burden in choosing the speed of the motor response on the one hand, and the sudden change in the path of the movement of the opposing player with or without the ball, whether in defense or attack, requires storing appropriate motor programs on the other hand. Therefore, the importance of the research lies and from here came the importance of the research through preparing and applying special exercises using some modern auxiliary tools for the purpose of improving agility and what this development reflects on the accuracy of scoring with the inside of the foot in football.

1-2 Research problem:

The performance requirements in football require finding diverse and modern training methods and techniques, which will contribute to the advancement and progress of players' levels in a gradual manner that keeps pace with these requirements.

The research problem emerges through the researcher's observations and field review of players' training in football, especially players under (20) years old, and he found a lack of auxiliary tools used to improve the agility trait, as the exercises were limited to using traditional methods or prevailing tools that do not exceed two types only, which does not allow for diversity and change, which is one of the important rules in sports training, and the use of modern and diverse tools by the researcher is a refinement and formation of the skills of that trait and the accuracy of scoring with the inside of the foot to contribute to the development of the game of football in Iraq with the aim of finding and solving this problem.

1-3 Research objectives:

- Preparing special exercises using some auxiliary tools to develop agility and accuracy of scoring with the inside of the foot for football players under (20) years old.
- Identify the effect of special exercises using some auxiliary tools in developing agility and accuracy of scoring with the inside of the foot for the research sample.

1-4 Research hypothesis:

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- There are statistically significant differences between the pre- and post-tests in developing agility and accuracy of scoring with the inside of the foot for football players under (20) years old.

1-5 Research areas:
1-4-1 Human field: Al-Sinaa Club football players under (20) years old.
1-4-2 Time field: From (3/2/2024) to (5/4/2024).
1-4-3 Spatial field: Municipalities Youth Forum Football Stadium_ Baghdad.
3- Research methodology and field procedures:
3-1 Research methodology:
The researcher used the experimental method with the same pre- and post-test to suit the research problem.
3-2 Research community and sample:

The research community is represented by Baghdad clubs for players under (20 years) for Iraqi youth clubs, which number (16) clubs, with a total number of (430) players, which represents (100%) of the number of players. The research sample was represented by the players of Al-Sinaa Sports Club for the youth category, which number (26) players, representing (6.05%). The research sample was chosen randomly by lottery, and the goalkeepers were excluded, numbering (4), as well as the exclusion of (4) players due to injury and non-compliance with training units.

3-3 Methods of collecting information, devices and tools used in the research:
3-3-1 Methods of collecting information:
• References and Arab and foreign sources.
• Personal interviews.
• Examination form.
• The World Wide Web (Internet).
• Tests and measurements.
• Exploratory experiment.
3-3-2 Devices and tools used in the research:
• Legal footballs, number (10).
• Referee whistle (3).
• Stopwatch.
• Boxes with different heights (30, 50, 60) cm.
• Indicators (30) cm (10).
• Swedish bench (30) cm (2).
• Perforated cone indicator + stick (Cone), number (32) + (16).
• Disc indicator (Disk), number (12).
• Height obstacles (10cm) (Hurdles), number (18).
• Height obstacles (20cm) (Hurdles), number (18).
• Agility ladder (Agility Ladder), number (4).
• Color rings (Color Rings), number (20).
• Tape measure made of Chinese cloth.
3-4 Field research procedures:
3-4-1 Tests used in the research:
First/ Illinois Agility Test. (DAVIS, B. et al, 2000, 129).
 Test name: Illinois Agility Test.

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- ✓ Test purpose: Measure agility.
- ✓ Tools used: (Playground, 8 cones, stopwatch, recording form.
- ✓ Performance description: (
- ✓ This test requires the athlete to run in the red line path in the diagram below as fast as possible.
- ✓ The player lies face down on the ground at the "start" cone
- ✓ The tester is given the "go" command and the stopwatch is started.
- ✓ The player jumps on his feet and starts running in the path around the cones following the red line path as shown in the diagram until the end. As shown in Figure (1).
- ✓ Recording: The time in which the player covered the specified distance is recorded.

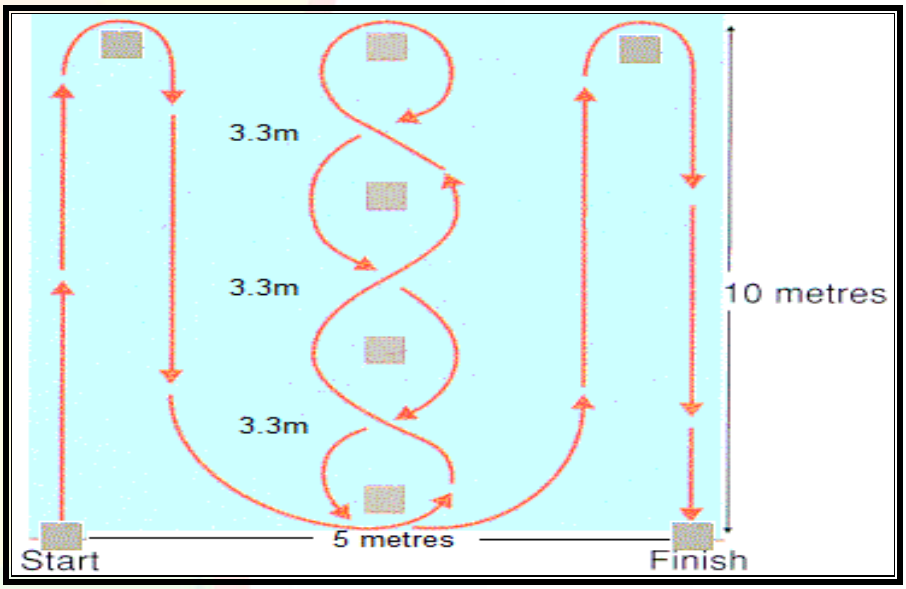

Figure (1)
illustrates the Illinois Agility Test

Second: Testing the accuracy of scoring with the inside of the foot in the presence of a wall (Al-Ahmad, Abdul Malik Suleiman, 2004, 84).

- Test name: Accuracy of long-distance scoring with the inside of the foot.
- Purpose of the test: Measuring the accuracy of long-distance scoring with the inside of the foot and from different areas and in the presence of a wall.
- Tools used: A football field, a football goal divided into several sections and defined on the difficulty areas each square with a length of (80 cm) and a width of (145 cm), 6 footballs, a measuring tape, ropes to divide the goal, magnesium to determine the distance of long-distance scoring (20 m), a wall.
- Performance Description: The ball is fixed in the designated scoring area and the tester shoots the ball with the inside of the foot at the most difficult spot of the target to get the most points. The scorer stands in a place that allows him to see all the balls heading towards the target, the place where the wall is placed, which is the legal distance of 10 yards from the ball and in the three areas. The scorer, with the help of another person, observes and records all successful goals that pass through the designated areas of the target as in Figure (3).

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- Note: One of the assistants collects the balls and returns them to the tester's standing area.
- Two experimental attempts can be given to the tester, the results of which are not counted.
- Each tester is given (6) attempts to score from the right.
- Each tester is given (6) attempts to score from the middle.
- Each tester is given (6) attempts to shoot from the left.
- How to calculate the score:
- Balls that fall outside the target are scored zero.
- Balls that hit the wall and reach or do not reach the target are scored zero.
- Successful balls that fall in square number (5) of the target are awarded (5) points.
- Successful balls that fall in square number (4) of the target are awarded (4) points.
- Successful balls that fall in square number (3) of the target are awarded (3) points.
- Successful balls that fall in square number (2) of the target are awarded (2) points.
- Successful balls that fall in square number (1) of the target are awarded (1) point.
- Successful balls that fall in square number (-) of the target are awarded (zero).
- Balls that collide with the ropes used to divide the target are repeated and an attempt is given instead.
- The final score for the test is the sum of the scores the examinee gets from the six attempts in each of the three areas, so that the total score for the test is 90 points. This includes 30 points for the right, 30 points for the middle, and 30 points for the left.

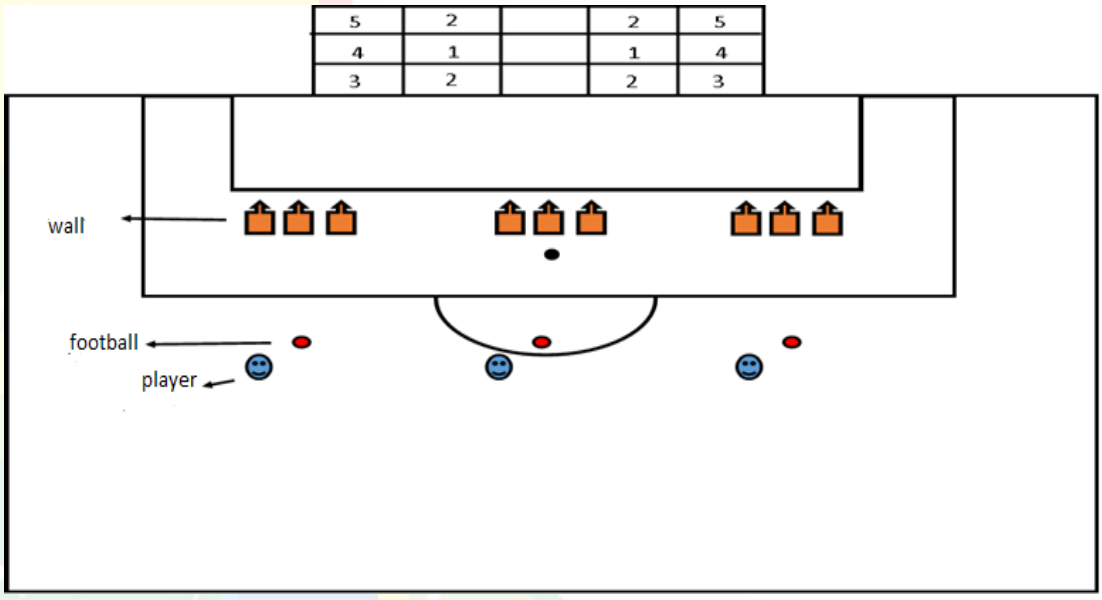

Figure (2)
The accuracy test of the inside of the foot with the wall present

3-4-3 Exploratory experiment:
(The researcher conducted the exploratory experiment on a number of players from Al-Karkh Club, numbering (5) players on Saturday) corresponding to 2/3/2024 at three o'clock in the afternoon. The purpose of this experiment was as follows:

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

• To ensure the safety and validity of the tools used in implementing the tests.
• To know the time taken for each test.
• To know the extent of the work team's understanding of the details of the tests and how to implement them, as well as how to record the test results.
• To ensure the suitability of the tests to the sample level and the extent of their understanding and response to them.
• To know the obstacles and negatives faced by the researcher and the work team during the implementation of the tests.
• To work on overcoming and avoiding errors before implementing the main experiment.

3-4-4 Pre-tests:

The researcher conducted the pre-test on the research sample on Wednesday, 6/3/2024, at the Municipalities Youth Forum Football Club stadium, in addition to preparing all the requirements and supplies for the tests.

3-4-5 Main experiment:

The researcher prepared special exercises to develop agility and accuracy of scoring with the inside of the foot using some auxiliary tools, within the framework of the training curriculum for the special preparation stage, relying on the exploratory experiments he conducted and taking into account the age group, physical abilities and available capabilities of the research sample and basing his preparation on the scientific foundations of sports training and on some scientific sources and references, and relying on the opinions of experts and specialists in addition to scientific sources.

The training curriculum was applied for a period of (8) weeks at a rate of two training units per week for the period from 10/3/2024 to 1/5/2024, as the number of training units reached (16) training units with a time of (90) minutes per training unit, and the researcher exploited the physical part of the main section of the training unit for (35) minutes.

The researcher adopted the following rules in producing the training units:

- The researcher adopted the interval training method (low and high intensity)
- The training intensity was adopted on the basis of the player's maximum pulse rate according to the following equation (Muhannad Al-Bashtawi and Ahmed Al-Khawaja, 2005, 66) (220 - age = maximum heart rate)

Maximum heart rate X target intensity / 100

- When calculating the total intensity of the training unit, the researcher used the following steps (Mohammed Reda Ibrahim, 2001, 7):
- Extracting the absolute volume of a single exercise.
- Extracting the percentage of partial intensity by:

Partial Intensity Percentage = Heart Rate from Each Exercise X 100/ Maximum Heart Rate

- Multiply the absolute volume of the exercise by the percentage of partial intensity
- Extract the absolute volume for all exercises.
- Extract the sum of (partial intensity X absolute volume).

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

- Extract the total intensity of the training unit according to the following law:

Total Intensity Percentage = Partial Intensity X Total Absolute Volume / Total Absolute Volume of Given Exercises

3-4- 6 Post-tests:
The researcher, with the help of the assistant work team, conducted the post-tests on Saturday (4/5/2024) at the Municipalities Youth Forum football field. The test was supervised by the researcher and the assistant work team.
3-6 Statistical methods
The researchers used the following statistical systems:

- The ready statistical package (IBM.SPSS.Ver20) to obtain the following:
- Arithmetic mean.
- Standard deviation.
- Skewness coefficient.
- T-test for correlated samples.

4- Presentation, analysis and discussion of the results:
4-1 Presentation, analysis and discussion of the results of the research tests:
Table (1)
shows the arithmetic means and standard deviations of the (t) value for the pre- and post-test for the research sample individuals.

Significant	Sig	Value T	Post		Pre		Test
			E	S	E	S	
Significant	0.00	30.511	0.645	18.009	0.655	19.130	**Agility**
Significant	0.000	8.775	0.756	8.000	0.886	5.250	**Scoring test**
Significant	0.033	3.742	4.03	21.75	3.095	14.75	**Accuracy in front of goal**
Significant	0.019	4.629	3.55	18	2.708	8	**Accuracy in front of goal**
Significant	0.013	5.329	3.095	19.75	3.593	6.250	**Accuracy right of goal**
* Significant at a significance level of (0.05) and a degree of freedom of (17).							

From Table (1), it is clear that there are significant differences between the pre- and post-tests in favor of the post-test, which shows a decrease in the time to complete the agility test. This means that the player's ability to control his entire body or part of it on the ground or in the air has developed significantly among handball

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

players, which the researcher attributes to the effectiveness of the exercises related to the use of assistive tools and their diversity and the correctness of implementing these exercises has greatly helped in improving this important characteristic. “Physical training using exercises prepared on a correct scientific basis leads to the development of various physical and motor characteristics, including agility, as paying attention to it and developing it is one of the important and basic matters in all sports” (Louay Sobhi Jassim, 2001, 94). Since the characteristic of agility is a complex characteristic (physical movement), these various exercises using tools were characterized by a complex movement character of strength and speed of reaction, movement speed, harmonious movements, balance, movement accuracy, and movement connection in terms of changing directions, some of them with jumping movements and short and fast launches, and some of them relied on specific movement paths that were close and somewhat similar to the situations that occur in the match, as these exercises helped the players to obtain new adaptations and thus created a new state for their abilities in the post-test of agility, and this is consistent with what (Mohammed Reda Ibrahim) confirmed (in sports training, the coach is required to be very creative and understanding and to have a large stock of various exercises that allow him to change the state of boredom and tedium periodically, and the coach can enrich the physical exercises by movements with technical models similar to the movements of skill performance, which develop the movement capabilities required for the game or the practiced activity) (Mohammed Reda Ibrahim Al-Madamagh, 2009, 80). The tools have also greatly helped players gain the attribute of agility in terms of controlling their movements and increasing their ability to sense distance, time and direction. This is what (Bilal Khalaf Al-Sakrana) indicated (that the use of auxiliary tools and devices in training has become a very important matter for improving many physical and motor qualities, as these tools and devices work to help the coach transfer information to the players faster and provide them with sensory experiences, as well as helping them focus attention and increase the excitement factor when performing, and also leading to gaining deep experiences and a lasting impact) (Bilal Khalaf Al-Sakrana, 2011, 195). (Lama Samir Al-Shaikhli) adds, “The auxiliary means help to retain the movement and store it for a longer period, because they use more than one sense in their performance” (Lama Samir Al-Shaikhli, 2000, 37). As for the accuracy of the skill of scoring from within, it is clear that there are significant differences between the pre- and post-tests in favor of the post-test. The researcher attributes that the diversity and repetition in the physical exercises under study contributed to the development of these skills; because this contributed to giving the player gradualness and mastery in acquiring neuromuscular coordination during the number of repetitive attempts. (Yasser, 1997, 13) emphasizes that “training processes must be organized in a way that guarantees the player the acquisition of the best performance of skills to achieve the best accomplishment, and this is done through training that organizes the repetition of skills or movements in a specific manner for the purpose of possessing the special skills and conveying them to the motor feeling.” And that physical exercises have contributed to increasing the strength characterized by speed, and thus reflected positively on skill performance, which was confirmed by (Raisan Khuraibat, 2000, 70) as he believes that "the strength characterized by speed is related to the degree of mastery of skill performance. The higher the degree of skill performance, the higher the level of compatibility between the fibers and the muscles and the improvement of the temporal and dynamic distribution of motor performance. Therefore, the athlete does not achieve a high level of strength characterized by speed except in the case of a high level of skill performance." The researcher also attributes that the exercises used in the research are of great importance in developing the muscle groups of the entire body, which in turn contributed to the physical and skill preparation required for players. This also agrees with what (Wajih and Mahjoub, 2000, 176) see "that exercises are of great importance in general and special physical preparation and skill preparation for beginners or for higher levels, with its characteristics of preparing athletes physically and skillfully in a way that is compatible with that activity."

Proximus Journal of Sports Science and Physical Education
Volume 2, Issue 02, February, 2025
https://proximusjournal.com/index.php/PJSSPE
ISSN (E): 2942-9943

5- Conclusions and recommendations:

5-1 Conclusions:

• The special exercises prepared by the researcher using some auxiliary tools have a positive effect on developing agility.

• The exercises for auxiliary tools used in developing agility were positively reflected in the accuracy of scoring from the inside of the foot.

• The gradual increase in the components of the training load using appropriate repetitions and in a wavy manner had a positive and effective effect on improving the agility characteristic, which was reflected in the accuracy of skill performance.

5-2 Recommendations:

• Emphasizing the use of auxiliary tools by trainers in the training process for their positive impact on developing and enhancing the players' abilities and capabilities, in addition to increasing their excitement factor when performing.

• Applying exercises for auxiliary tools to other age groups for their positive role in developing physical and motor qualities and abilities.

• Conducting similar studies and research on physical and motor qualities and other skills in football that were not addressed in the study.

Sources:

1. Bilal Khalaf Al-Sakrana; Modern trends in training. 1st ed.: (Amman, Dar Al-Maisarah for Publishing and Distribution, 2011).
2. Risan Kharbit, Ali Turki; Strength Training Theories: (Baghdad, University Press, 2002).
3. Lama Samir Al-Shaikhli; The Effect of Using Assistive Tools on the Speed of Learning and Accuracy of Performing Some Basic Volleyball Skills: Master's Thesis, University of Baghdad, College of Physical Education, 2000.
4. Luay Subhi Jassim; Developing Agility and Its Effect on Performing Some Basic Basketball Skills, PhD Thesis, College of Physical Education, University of Baghdad, 2001.
5. Muhammad Redha Ibrahim Al-Madamagh; Field Application of Sports Training Theories. 2nd ed.: (Baghdad, University House for Printing and Publishing, 2009).
6. Muhammad Redha Ibrahim; Lectures for Postgraduate Students, PhD Stage, College of Physical Education, University of Baghdad, 2001.
7. Muhannad Al-Bashtawi and Ahmed Al-Khawaja; Principles of Sports Training. 1st ed.: (Amman, Wael Publishing and Distribution House, 2005).
8. Wajih Mahjoub; Learning and Training Scheduling: (Baghdad, Al-Adel Library for Printing, 2000).
9. Yasser Dabour; Modern Handball: (Alexandria, Manshaat Al-Maaref, 1997).
10. DAVIS, B. et al. (2000). Physical Education and the Study of Sport. 4th ed. London: Harcourt Publishers